



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

CHAPTER REPORTS

THE OHIO CHAPTER

During the year 1919-20 the chapter held two business meetings and five scientific meetings, two of which were open to the public. The addresses for the year were as follows: On January 21, 1920, reports of the trend of research in the various fields of science as indicated by the papers presented at the scientific meetings during the holiday recess at St. Louis. Mo., by faculty members of the various departments of science on the campus. March 11, 1920, Mt. Katmai and the Valley of Ten Thousand Smokes, by Professor Robt. F. Griggs, of the Department of Botany. April 3, 1920, Some Aspects of the New Universe, by Dr. L. A. Bauer, Director of the Department of Research in Terrestrial Magnetism, Carnegie Institution of Washington, D. C. May 29, 1920, The Growth of Scientific Knowledge as Illustrated in the History of Medical Science, by Dr. George Neil Stewart, Director of the H. K. Cushing Laboratory of Experimental Medicine, Western Reserve University, Cleveland, Ohio. June 3, 1920, The Aims and Purposes of the National Research Council, by Dr. C. E. Mendenhall, Chairman of the Division of Physics of the National Research Council.

The chapter shows increased activity since war times both in the number of addresses given and in the larger number of new members elected. The active members for the year numbered 118 and 63 new members were added in the May election. The names and basis of election of the new members follow:

UNDERGRADUATES

- RALPH DANIEL BAKER *Chemical Engineering*
Plans, Specifications and Operation of the Sulphuric Acid Plant of the Farmer's Fertilizer Company of Columbus, Ohio. Thesis.
- JULIUS BOSWAY *Electrical Engineering*
Alternator Regulation; a Comparative Study of the Different Methods of Calculating Alternator Regulation. Thesis.
- COLIN ALFRED CAMPBELL *Civil Engineering*
Report Upon the Capacity of the Fishinger Bridge Over the Scioto River. Thesis.

- EDWIN NELSON COLE COOLIDGE *Chemistry*
Joint author, A Rapid Method for the Determination of Sulphur in Rubber Compounds. India Rubber Work, March, 1920. The Action of Certain Organic Accelerators in the Vulcanization of Rubber. Jour. Ind. and Eng. Chemistry, 12:1920.
- GEORGE FREDERICK DRUM *Electrical Engineering*
Commutation: A Study of the Effect of Interpole Shape on Commutation. Thesis.
- SAMUEL BYRON FOLK *Civil Engineering*
A Flood Relief Project for Marion County, Ohio. Thesis.
- JOSEPH SCOTT GREGORIUS *General Engineering*
Special Cases of Devitrification and Glass "Stones" Found in Glass Batches.
- CARL EUGENE GRESSLE *Horticulture*
The Efficiency of Various Sprays in Weed Control.
- ALBERT THEODORE HAAG *Horticulture*
The Proper Method of Cutting Roses for Flower Production.
- OTTO HINDERER *Electrical Engineering*
Commutation: A Study of the Effect of Interpole Shape on Commutation. Thesis.
- LAWRENCE LESTER HUBER *Zoology*
A Study of a Chalcid Parasite.
- PHILIP ROSEMAND LOWRY *Zoology*
Methods of Fumigating Against Mealy Bugs. Revision of the Genus Phenacoccus.
- MABEL MARIE MADDEN *Mathematics*
Functions Having Preassigned Zeros and Infinitives.
- HAROLD THEODORE RUFF *Chemical Engineering*
A Study of Carbohydrate Adhesives. Thesis.
- VIRGIL EDWIN SCHULER *Civil Engineering*
Microscopic Investigation of Concrete and Determination of Proportions in Made Concrete. Thesis.
- PAUL BURGESS SHAWEN *General Engineering*
Investigation of Stresses in New York Central Railroad West Bridge No. 6, Western Division. Thesis.
- ROBERT BRUNING SHERMAN *Civil Engineering*
A New Passenger Terminal for Columbus, Ohio. Thesis.

- FILLMORE DOWEL SWAN *Mechanical Engineering*
Static Tests of Dirigible Airship Models.
- ARTHUR DRUMMOND SWINGLE *Horticulture*
Blossom End Rot of Tomatoes in Greenhouse Production.
- LOUIS EDMOND VANDEGRIFT *Civil Engineering*
Determination of Stress Distribution in the Town Street Bridge, Columbus, Ohio. Thesis.
- WALTER V. BALDUF, B.A. *Zoology and Entomology*
Insects Affecting the Soy Bean. Thesis for M.S.
- HERBERT LAWRENCE DOZIER, M.S. *Zoology and Entomology*
Annotated List of Gainesville, Florida Coleoptera, Entom. News, vol. 29. *Platycotis Vittata*, Ohio Jour. Sci.
- MERLE L. DUNDON, B.S. *Chemistry*
Determination of Solubility Curves by the Method of Floating Equilibrium. Thesis for M.S.
- KENNETH JAMES DURANT, B.A. *Chemistry*
Production of Synthetic Camphor. Thesis for M.S.
- RACHEL EDGAR, B.A., and B.S. *Agricultural Chemistry*
The Effect of High Temperature on the Nutritive Value of Foods, Especially as Concerns the Vitamines or Accessory Substances. Thesis for M.S.
- EDWIN ALLEN ESPER, B.A. *Psychology*
A Contribution to the Experimental Study of Analogy. Thesis for M.A. *Psych. Rev.*, 25:468-487, 1918.
- ELDRA WADE HARTLY, B.A. *Psychology*
The Correlation of Speed and Accuracy as Shown by the Examination of 500 Army Alpha Examinations. Thesis for M.A.
- ORA LORING HOOVER, M.S. *Chemistry*
The Study of a Method for Determining Selenium in Organic Compounds. Thesis for M.S.
- CLOYD DELSON LOOKER, B.S. *Chemistry*
The Influence of Alkali on the Formation of Vinyl Alcohol from Acetaldehyde. Thesis for M.S.
- CLARE S. MARTIN, B.S. *Chemistry*
Coal Tar Pitch Utilization in Paint. Thesis for M.S.
- ELLIS LEO NOBLE, B.A. *Psychology*
Intelligence Ratings of a Selected Group According to the Army Alpha Test. The Thurston Engineering Test and the Army Alpha Test.

- GORDON DERBY PATTERSON, B.S. *Chemistry*
 A Study of the Iodine Determination of SO₂ in Smelter Fumes. Thesis for M.S.
- JOEL BIGELOW PETERSON, B.S. *Chemistry*
 A Study of Cracking Petroleum by Catalysis. Thesis for M.S.
- YING LAM PUN, B.A. *Chemistry*
 Hydrogenation of Cottonseed Oil. Thesis for M.S.
- BRYAN AUGUSTUS RICE, B. Cer. Eng. *Ceramic Engineering*
 The Development of Glasses which Melt at Low Temperatures to be Used for Coating Metals.
- WALTER SCOTT, M.A. *Chemistry*
 The Application of Rapidly Rotating Reductors in the Determination of Vanadic Acid (with F. A. Gooch). *Am. Jour. Sci.*, 46:1918. The Application of Rotating Reductors in the Determination of Iron. *Jour. Ind. Eng. Chem.*, 11:1919. The Application of Rotating Reductor of Zinc in the Determination of Molybdenum. *Jour. Ind. Eng. Chem.*, 1920.
- LILY BELL SEFTON, M.A. *Chemistry*
 The Estimation of Nitrates and Nitrites in Battery Acid. *Tech. Papers of the Bur. of Standards No. 149*, 1920. The Standardization of Well-water in the Granville Vicinity. *Bul. Sci. Assoc. Denison Univ.*, 1911. The Determination of Impurities in Battery Acids (ready for publication).
- ERNEST LINCOLN STOVER, B.S. *Botany*
 A Study of the Relative Evaporation Rates in Various Plant Habitats in the Vicinity of Columbus, Ohio. *Taxonomy and Distribution of the Grasses*.
- EDWARD LAWRENCE WICKLIFF, B.S. *Zoology and Entomology*
 Food of the Young Small-mouth Bass. Thesis for M.S.

FACULTY

- LESLIE LAWSON BIGELOW, A.B., M.D. *Medicine*
 Lympho-sarcoma of the Mesentery, *Ann. Surgery*, Jan. 1920. The After-care of Surgical Patients, *Ohio State Med. Jour.* Tuberculous Peritonitis, *ibid.* Post-operative Thrombophlebitis, *ibid.* Differential Diagnosis of Fracture Into and Near Joints, *Columbus Acad. Med.*
- EMERY ROE HAYHURST, A.B., M.D., Ph.D. *Medicine*
 Report of an Expedition to Cripple Creek and Pike's Peak to Study the Effect of Altitude on the Blood (with G. T. Kemp). *Amer. Jour. Phys.* 10, no. 6, Feb. 1904. Critical Examination of 100 Painters for

Evidences of Lead Poisoning. Amer. Jour. Med. Sci., 147:788-804, 1914.
 The Prevalence of Occupational Factors in Disease, and Suggestions for
 Their Elimination. Jour. Amer. Med. Assoc. Dec. 1914. Health Hazards
 and Mortality Statistics of Soft Coal Mining in Illinois and Ohio.
 Jour. Ind. Hygiene, Nov. 1919; and others.

HOWARD MACK, Ph.D.

Chemistry

Water Content of Coal and Some Ideas on the Origin of Coal. Amer.
 Jour. Sci., 1916. Water Content of Colloidal Substances, Amer. Jour.
 Sci., 1918. Synthesis of Ethers. Jour. Amer. Chem. Soc., 39:712.

ANDREWS ROGERS, Ph.B., M.D.

Medicine

The Conduction of Labor in Occiput Posterior cases, Ohio State Med.
 Jour., 1914-15. Blood Pressure in Fatigue of Labor. Relation of Toxe-
 mias of Pregnancy to Metabolism and to Internal Secretions. Thymic
 Trachio-stenosis in the New Born. Endocarditis as an Influencing Fac-
 tor in Puerperal Morbidity.

NON-RESIDENT

MELVIN GUY MELLON, Ph.D.

Chemistry

Further Studies on a Lead Standard Cell. Jour. Amer. Chem. Soc.,
 42, April 1920. A Study of a Possible Method for the Differentiation of
 Raw from Pasteurized Milk. Jour. Ind. and Eng. Chem., 9, 1917.

ALUMNI

FRANK H. BLACKBURN, M.E.

Electrical Engineering

A Study of the Problem of Flashing Carbon Filaments and the Develop-
 ment of Automatic Equipment to Treat These Filaments to a Definite
 Final Resistance. Development of a Gauging System for Glass Tubing.

JAMES PARK CALDERWOOD, M.E.

Mechanical Engineering

Prevention of Pounding in Kerosene Engines. Bull. Penn. State Col-
 lege Eng. Exp. Station, no. 10. Purchasing of Coal by Specification and
 Methods of Sampling Coal, *ibid.* Bul. No. 14. The Effect of Velocity
 and Humidity of Air on Heat Transmission Through Building Ma-
 terials. *Ibid.* Bul. No. 16. Empirical Method for Determining the Ulti-
 mate from the Proximate Analysis of Coal. *ibid.* Bul. No. 21.

WALTER M. DANN, M.E.

Electrical Engineering

Mechanical Stresses in Reactance Coils. Elec. Jour., 11, 1914. Polarity
 of Transformers. *Ibid.* Vol. 13, 1916.

FRANK M. DORSEY, C.E.

Chemical Engineering

Researches on Charcoal for Lamps and Gas Masks. Researches on De-
 velopment of Poison Gases.

CLARE OLIN EWING, B.S., M.S.

Pharmacognosy

Sensitivity of some Commercial Litmus Papers (with Arno Viehoever). So-Called Syrian Alkanet, Macrotomia Cephalotes, D.C. (with J. F. Clevenger). Jour. Amer. Pharmaceutical Assoc. July, 1918. Partial Analysis of 330 American Crude Drugs (with Clevenger), Ibid. Dec. 1919, Jan. 1920; and others.

WILLIAM GEORGE GAESSLER, B.S.

Pharmacy

The Sudan-Grass Hay (with A. C. McCandlish). Jour. Ag. Research. An Iodine Addition Product of Cumarin (with A. W. Dox). Jour. Amer. Chem. Soc. Water Requirements for Milk Production (with A. C. McCandlish). Jour. Dairy Science. The Pasteurization of Cream for Butter Making (with M. Mortensen and W. H. Cooper). Bull. 156, Ag. Exp. Sta., Iowa State College.

EDWARD FREDERICK GEHRKENS, E.E.

Electrical Engineering

Improvements in Transformers, Compensators and Regulators.

FRANK HAAS, C.E., E.M.

Ceramic Engineering

Coal Analysis, W. Va. Geol. Survey. Treating Dust in Coal Mines. Eng. and Min. Jour. Mine Gases. Colliery Eng. Jour.

CHARLES POTTER HOOVER, B.A.

Chemistry

Electrolytic Production of Sodium Hypochlorite. Jour. Amer. Pub. Health Assoc., 1, 114. Methods and Equipment for Applying Lime Water at the Columbus Water Purification Works. Eng. News, 72:682-4, 1914. Manufacture of Sulphate of Alumina at Columbus Water Softening and Purification Works. Jour. Amer. Assoc., 43-448-9, 1915. Recovery of Spent Lime at Columbus Water Softening and Purification Works. Jour. Amer. Water Works Assoc., 3:889-93, 1916.

CLARENCE ROSCOE KING, B.S.

Chemical Engineering

The Improvement in Methods for the Manufacture of Abrasive Materials Used in the Grinding Wheel Industry.

HARRY LEPPER KIRKER, B.S.

Electrical Engineering

Important Work on the Electrification of Railways.

JOHN CROMWELL LINCOLN, M.E.

Electrical Engineering

Inventor of the Lincoln Variable Speed Motor and of other Products Manufactured by the Lincoln Electric Company and the Lincoln Bonding Company. Lime Disturbances due to Starting Induction Motors. Trans. Amer. Inst. Elec. Eng., 34.

JESSE JOSEPH LINEBAUGH, M.E.

Electrical Engineering

Inventor of the Method of Power Regenerator for Direct Current Electric Railways. Regenerator Electric Making. Gen. Elec. Rev., 19, 1916.

ZENO PAYNE METCALF, B.A.

Entomology

The Wing Venation of the Jassidae. *Ann. Entom. Soc. Amer.*, 6:103-115, 1913. The Wing Venation of the Cercopidae. *Ann. Entom. Soc. Amer.*, 10:27-34, 1917. Biological Investigations of *Sphenophorus colossus*. *Tech. Bull.*, no. 13, N. C. Exp. Sta., 1917. Lime as an Insecticide. *Jour. Econ. Entomology*, 10:74-78, 1917.

WILBUR EUGENE MOUGEY, M.E.

Electrical Engineering

Inventor, Engineer with the Western Electric Company. The Company has taken out in his name three patents, Nos. 1,124,249, 1,277,025, and 1,271,824.

ESTELLE COLER RANEY, M.E.

Electrical Engineering

Invention of an Automatic Breaker and Other Devices Connected with the Control of Electrical Circuit.

AUGUSTINE DAWSON SELBY, B.S.

Botany

Germination of Seeds of Some Common Cultivated Plants after Prolonged Immersion in Liquid Air. *Bul. Torrey Club*, 28:675-679, 1901. The Prevention of Onion Smut. *Bul. Ohio Ag. Exp. Sta.*, 131:47-51, 1902. A Rosette Disease of Potatoes Attributed to the Sterile Fungus, *Rhizoctonia*. *Bul. Ohio Ag. Exp. Sta.*, 139:53-66, 1903. Studies in Etoilation. *Bul. Torrey Club*, 33:67-76, 1906. Grape Rots in Ohio. *Bull. Ohio Ag. Exp. Sta.*, 123:85-94, 1901.

EDWARD HENRY TENNY, B.A., M.E.

Electrical Engineering

Elected on Basis of Engineering Achievements.

FRANCIS EDMUND WYNNE, B.A., M.E.

Electrical Engineering

Operation on the Norfolk and Western Railway. *Amer. Inst. Elec. Eng. Economics in Railway Operations*. *Ibid.* Selection of Correct Car Equipment. *Elec. Jour.* Locomotive Weights. *Ibid.*

H. C. SAMPSON, *Secretary*

THE MISSOURI CHAPTER

During the academic year 1919-1920 seven scientific and business meetings were held. The first two meetings were devoted to a discussion of the research work being done, time available for research, equipment for research, and research projects. Reports were made by all departments and these meetings proved to be among our most valuable of the year.

On October 21, 1919, the Society listened to an interesting talk by Dr. C. E. McClung as to the aims of the National Research Council.

The Society held a joint meeting with Alpha Zeta Pi on March 12 at which time Mr. S. W. Hamilton, special agent of the National Committee of Mental Hygiene, who is making a survey of Missouri institutions for the insane and feeble minded, addressed us on the subject of Care of the Insane in Missouri.

Our Circuit Public Lecturer for the year was Dr. W. A. Noyes of the Department of Chemistry of the University of Illinois. He gave us two very enjoyable lectures, the first on Foundations and Chemical Development and the second on Positive and Negative Valence. These lectures were held on March 26 and 27.

The first public meeting where active members presented papers was on March 18, 1920. The following program was given:

Dr. C. W. Greene, On the Physiological Changes in the Human Heart Rate and Blood Pressure as Experienced by Aviators.

Dr. P. F. Swindle, A New Theory of Association.

At this meeting the following associate members were elected. All were graduate students.

ELDON CLAUDE BOHRER	<i>Physiology</i>
JESSE REEVES CAMP	<i>Chemistry</i>
FRED OSCAR COE	<i>Zoology</i>
HERBERT F. KRIEGE	<i>Chemistry</i>
MARY ENGLETON LEAR	<i>Chemistry</i>
PAUL M. MORTON	<i>Physiology</i>
WALTER S. RITCHIE	<i>Chemistry</i>

The annual business meeting for the election of new active members and officers was on March 23, 1920. The following were elected to active membership in the society:

FACULTY

ALEXANDER CARTWRIGHT LANIER, B.S. in E.E., M.E., M.EE.

Professor Electrical Engineering

Experimental Determination of Pole Face Losses. *Proc. Am. Inst. Elec. Eng.* Development of Motor-Generator Balancer Sets, with special reference to compounding and stability. *Elec. Jour.*, 1912.

FRANCES VIRGINIA GUTHRIE, A.B., B.S., M.A.

Instructor in Pathology

Modification of Tissue Oxidation in Vitro. *Proc. Soc. Exp. Biol. and Med.*, 1910, 7:152. The Effects of Direct Application of Magnesium

Salts. *A.* To Motor and Sensory Nerves: *B.* To Cardio-Inhibitory Nerves. C. C. Guthrie, F. V. Guthrie and A. H. Ryan. *Proc. Soc. Exp. Biol. Med.*, 1909, 7:39. The Effect of Asphyxia on the Pupil. *Science n.s.*, 1910, 31:395. The Pigmentation of Nerve Cells. I. The Non-Fatty, Melanotic Pigment in the Dog and Rabbit produced by Chronic Depression. David H. Dolley and Frances V. Guthrie. *Jour. Med. Research*, 1918, 39:123. II. The Bipochrome a Plant Carotinoid Pigment. David H. Dolley and Frances V. Guthrie. *Jour. Med. Research* 1919, 40:295.

GRADUATES

FINIS OMER DUNCAN, B.S. *Mathematics*

Riemann Surfaces for Certain Non-analytic Transformations—thesis for M.A.

EUGENE LEE SETTLES, A.B. *Medicine*

The Effect of a High Fat Diet on the Size of Lymphoid Organs—thesis for M.A.

HUGH POTEET MUIR, A.B. *Medicine*

The Venous System of the Twenty Millimeter Pig Embryo—thesis for M.A.

OLIVER HENRY GAEBLER, A.B. *Medicine*

The Bladder Epithelium in Contraction and Expansion—thesis for M.A.

WILLIAM DEAN COLLIER, A.B. *Medicine*

The Experimental Production of Functional Cell Hypertrophy—thesis for M.A.

The chapter held its annual initiation on April 21. This was followed immediately by a joint luncheon with Phi Beta Kappa. Dean F. F. Mumford of the College of Agriculture addressed the two societies on the Spirit of Research, and Dean Walter Miller of the Graduate School, on the Spirit of Letters and Philosophy. All members of both organizations desire the repetition of this joint luncheon.

W. A. TARR, *Secretary*

ILLINOIS CHAPTER

Report of the Illinois Chapter of Sigma Xi for the year 1919-1920.

The Illinois Chapter closes a successful year. Eight meetings have been held, at seven of which scientific programs were presented.

A social hour was held immediately following each of these programs. The active membership has been about 170 and the associate membership 15.

The following is a summary of the programs for the year:

October 22. The International Union of Pure and Applied Chemistry, Professor E. W. Washburn. The International Astronomical Union, Professor Joel Stebbins.

November 19. Water Supplies for the American Troops in France, Professor Edward Bartow.

January 14. At the meeting of January 14 a large number of short papers were presented which were summaries of papers read before various scientific societies during the holiday recess.

February 18. Untechnical Discussion of the Changing Views as to Compounds and Elements, Atoms and Electrons, Matter and Energy, led by Professors Eric K. Rideal and Jakob Kunz.

March 17. Algae as Rock Builders, Professor C. F. Hottes.

April 14. Relation of the National Research Council to the Sigma Xi Society, Professor C. E. McClung, President of the National Society.

May 5. Election of officers and members.

May 19. Initiation of members. Presidential address, The Survival of the Unlike, by Professor W. Trelease.

Below is given the list of elections in the various classes with the basis for election in each case.

ACTIVE MEMBERS FROM THE FACULTY

VINCENT STEPHEN DAY, B.S. *Mechanical Engineering*

Emissivity of Heat from Various Surfaces, Bull. 117, Eng. Exp. Sta., Univ. of Ill.

WILLIAM ALBERT DUNKLEY, B.S. *State Geological Survey*

Influence of Quality of Gas and Other Factors on the Efficiencies of Gas Mantle-Lamps. Technologic Paper No. 110, U. S. Bur. of Stand., with R. S. McBride. The Manufacture of Retort Coal Gas in the Central States using Low-Sulfur Coals from Illinois, Indiana, and Western Kentucky. Bull. 21, Cooperative Mining Series, by Ill. State Geol. Survey, with W. W. Odell. Water-Gas Manufacture with Central District Bituminous Coals as Generator Fuel. Bull. 22, Cooperative Mining Series, with W. W. Odell. Also other publications.

- EMRY G. HYATT, B.S. *Pharmacology*
 Antidotes in Mercuric Chloride Poisoning. Jour. of Lab. and Clin. Med., 2, Aug. 1917. The Primary Depression and Secondary Rise in Blood Pressure Caused by Epinephrine. Jour. Pharmacol. Exp. Therap. 12, Sept. 1918. The Action of Alcohol on the Heart and Respiration. Jour. of Lab. and Clin. Med., 5, Oct. 1919.
- WALTER WOLLEBEN KUSTERMANN, A.B., Ph.D. *Mathematics*
 Über Fouriersche Doppelreihen. Inaugural diss. Munich, (1913). Proof of Convergence. Bull. Amer. Math. Soc. (1914). Funktionen von beschränkter Schwaukung. Math. Annalen, (1916).
- REXFORD NEWCOMB, B.S., A.M. *Architecture*
 Franciscan Mission Architecture of Alta, California. Arch. Book Pub. Co. A Remnant of Spanish Architecture in Texas. Western Arch. (1919). A Completion of the Mission of San Antonio de Valero, Texas. Western Arch. (1919). The Architecture of the Spanish Renaissance in California. Also other publications.
- WILLIAM FERDINAND PETERSON, B.S., M.D. *Pathology*
 Studies in Ferment Action. Jour. Exp. Med. 1914 to 1916, No. 10-32. The Ferment-Antiferment Balance and its Relation to Therapeutics. Arch. Int. Med., 20, Oct. 1917. Serum Changes Following Protein "Shock" Therapy. Arch. Int. Med., 20, Nov. 1917. Factors in Resistance to Tuberculosis. Arch. Int. Med., 21, Jan. 1918. Also other publications.
- WILLIAM HORACE RAYNER, B.S., C.E. *Civil Engineering*
 Errors in the Use of the Steel Tape. Proc. Ill. Soc. Eng. and Surveyors (1916). Corrections for Sag in Long Steel Tapes. Eng. and Min. Jour., Aug. 1917. Socializing our Engineering Education. Bull. Soc. for Promotion of Eng. Edu. (1914). Bachelors of Science or Skill. Eng. Educ., Mar. 1919.
- ERIC KEIGHTLEY RIDEAL, M.S., Ph.D., D.Sc. *Chemistry*
 Das elektrochemische Verhalten des Urans und einiger Uranverbindungen. Inaug. Diss., Bonn, (1913). Biography, 66-68. (Rideal and Evans, U.V.) An electrochemical indicator for oxidizing agents. Analyst 38:353-63. The Corrosion and Rusting of Iron. Abst. in Surveyor 44: 848-49; also in C. A. 8:1083. Eng. Contrg. 40:735-737. Awarded gold medal. Electrometallurgy. (1918). (Rideal and Taylor, H. S.) Catalysis in Theory and Practice. (In press). Ozone. (In press).
- EMMA LOUISE WARDELL *Home Economics*
 The Colorimetric Estimation of Cholesterol in Blood. Myers and Wardell, J. Biol. Chem., 36:147. The Concentration of Urea in Human Blood. Kast and Wardell. Arch. Int. Med., 22:581. Effect of Ingestion of Coffee, Tea and Caffein on the Excretion of Uric Acid in Man. Mandel and Wardell. J.A.M.A., 68:1805.

ACTIVE MEMBERS FROM GRADUATE STUDENTS

- MINER MANLEY AUSTIN, A.B., M.S. *Chemistry*
Potash in Illinois Shales—thesis for Ph.D.
- DORTHA BESSIE BAILEY, A.B. *Chemistry*
Anti-Dimming Preparations for Gas Masks. Jour. Ind. and Eng. Chem.,
77. Dec. 1919. The preparation of Synthetic Mydriatics—thesis for M.A.
- CHARLES FRANCIS GREEN, A.B., A.M. *Mathematics*
On the Summability and Regions of Summability of a General Class of
Series of the Form $\sum c_n g(x+n)$ —thesis for Ph.D.
- COLEMAN ROBERTS GRIFFITH, A.B. *Psychology*
A Possible Case of Instinctive Behavior in the White Rat. Sci., 50:166,
1919. The Behavior of White Rats in the Presence of Cats. Psycho-
biology, 2:19, 1920.
- ADA ROBERTA HALL, B.A., M.A. *Zoology*
Some Experiments on the Resistance of Sea-urchin Eggs to Sulphurous
Acid. Univ. Oregon Pub. Regeneration of Nerves in the Earthworm.
Jour. of Morphology. (In press).
- WALTER JOHN RICHARD HEINEKAMP, B.S. *Pharmacology*
Action of Adrenalin on the Heart. I. Action on the Turtle Heart.
Jour. Pharm. Exp. Therap., 14, Sept. 1917. II. The Modification of
the Action of Adrenalin. Jour. Pharm. Exp. Therap., 14:327, Dec.
1919. A Simple Method for the Preparation of a Spinal Animal. (with
Hugh McGuigan, M.D.) Jour. of Lab. and Clin. Med., 4, May 1919.
Recovery of Streptococcus Hemolyticus from Restaurant Tableware.
Amer. Jour. of Pub. Health. (In press).
- RALPH WILLIAM HUFFERD, A.M. *Chemistry*
The Application of Victor Meyer's Esterification Law to Neighboring
Xylic Acid and its Reduction Derivatives—thesis for Ph.D.
- WILLIAM HENRY HYSLOP, A.B., A.M. *Physics*
An Undamped Wave Method of Determining Dielectric Constants of
Liquids. Phys. Rev., 15, 2nd Series, Mar. 1920. (With A. P. Car-
man)—thesis for Ph.D.
- JOSE JISON MIRASOL, B.S., M.S. *Agronomy*
Aluminum as a Factor in Soil Acidity—thesis for Ph.D.
- SAMUEL RUSSELL OFFUTT, B.S. *Civil Engineering*
Analysis of Statically Indeterminate Building Trusses by the Application
of Maxwell's Theorem of Reciprocal Displacements and the Develop-
ment of Empirical Formulae for the Reactions and Moments—thesis for
M.S.

WILLIAM LOUIS SCHWALBE, B.S. *Theoretical and Applied Mechanics*
The Determination of the Mobility of the Materials and Mixtures in
Making Concrete—thesis for M.S.

LYNNE HERMANN ULICH, A.B. *Chemistry*
The Use of Oxalyl Chloride and Bromide for Producing Acid Chlorides,
Acid Bromides or Acid Anhydrides. Jour. Am. Chem. Soc., 42:599,
1920. The Condensation of Aliphatic and Aromatic Halides with Aliphatic
Aldehydes—thesis for Ph.D.

ROSCOE WOODS, A.B., A.M. *Mathematics*
Elliptic Modular Functions Associated with the Elliptic Norm Curve
 E' —thesis for Ph.D.

SADAO YOSHIDA, D.Sc. *Zoology*
On the Development of *Ascaris Lumbricoides*. Jour. Parasit., 5, March
1919. On the Resistant Power of Ascarid Eggs in their Development.
Tokyo Med. Weekly Jour. (Japanese), May, 1919. On the Migrating
Course of Ascarid Larvae in the Body of the Host. Jour. Parasit., 5,
Sept. 1919. Also other papers.

ASSOCIATE MEMBERS FROM GRADUATES

BEULAH ARMSTRONG, A.M. *Mathematics*

FOSTER FLOYD ELLIOTT, B.S. *Dairy Husbandry*
A Study of the Semi-official Records of Holstein-Fresian Cows—thesis
for M.S.

EDWIN COULTHARD FRITTS, B.S. *Physics*
Experiments on Osmotic-Electric Electromotive Forces. Phys. Rev.,
15, 2nd Series, Feb. 1920. (With A. P. Carman).

LLOYD BLINN HAM, A.B. *Physics*
Notes on Black Nickel Finishes. The Monthly Rev., Published by
Amer. Electroplaters Soc., 6, July, 1919. (With G. B. Hogaboom).

BRUCE MAGILL HARRISON, A.B., A.M. *Zoology*

AMOS HENRY HERSH, A.B., A.M. *Zoology*
The Development of the Vitreous Body in the Eye of the Chick—
thesis for A.M.

DUNCAN CHARTERIS HETHERINGTON, A.B. *Zoology*
Studies on *Protospirura muris* (Gmelin 1790)—thesis for A.M.

CHARLES FRANCIS HILL, A.B., A.M. *Physics*
A Determination of the Absorption of Gases by Different Kinds of
Glass—thesis for Ph.D.

- CLEMENCE WILLIAM HIPPARD, B.S. *Mining Engineering*
Storage of Coal. Eng. Exp. Sta. Circular (in press). In collaboration
with Professor H. H. Stoek.
- RALPH CRAIG HUFFER, A.B. *Mathematics*
On the Methods of Determining Complex Roots of Algebraic Equations—
thesis for A.M.
- WALTER RAYMOND KIRNER, B.S. *Chemistry*
The Preparation of Synthetic Quinoline Compounds Similar to Quinine—
thesis for M.A.
- CLAUDE JEROME LAPP, A.B. *Physics*
A Graphic Study of Sound Waves Emitted by Singing Tubes—thesis for
M.A.
- JACOBUS STEPHANUS MARAIS *Agronomy*
- ROY ANDREW NELSON, B.S. *Physics*
Experimental Methods of Determining Thermal Conductivity of Poor
Conductors—thesis for M.S.
- ELEANOR FRANCES SEILER, B.A., M.A. *Physics*
Color Sensitiveness of Photo-Electric Cells—thesis for Ph.D.
- WILLIAM PERCIVAL SNYDER, B.S. *Botany*
The Effect of External Conditions on the Development of the Common
Bean—thesis for M.A.
- FLOYD KENYON THAYER, A.B. *Chemistry*
The Introduction of a Carboxyethyl Group into the Molecule of Cer-
tain Synthetic Local Anesthetics—thesis for M.A.
- LYELL JAY THOMAS, B.S. *Zoology*
The Male of *Trichosomoides crassicauda* (Bellingham 1843)—thesis for
A.M.
- ALFRED CHARLES VOGELE, B.S. *Botany*
The Effect of Ultra-Violet Light on Oat Seedlings—thesis for M.A.
- FRANK GUSTAV WAHLEN, B.S., M.S. *Mathematics*
Thermal Properties of Ammonia—thesis for Ph.D.
- MARGARET WALKER *Mathematics*
Brownlee's Graduation Formulae Applied to U. S. Life Tables—thesis
for M.A.

- ELLIS RUSSELL WEAVER, B.S. *Zoology*
The Morphology of *Heterakis spumosa* (Schneider 1866)—thesis for M.S.

ASSOCIATE MEMBERS FROM UNDERGRADUATES

- HENRY ERNES BRAUER *Chemical Engineering*
Relation of Properties and Structure of Tungsten and Molybdenum High Speed Steels to Heat Treatment—thesis for B.S.
- MARGARET JEANNETTE BUSEY *Chemistry*
Primary Decomposition Products Occurring at Successive Temperatures in the Carbonization of Lignite Coal—thesis for B.S.
- OSCAR ALLEN CHERRY *Chemistry*
The Effect of Oxygen on the Coking of Coal—thesis for B.S.
- IRVING ALSON DENISON *Agronomy*
- MORRIS EDWARD DREYFUS *Chemical Engineering*
Spiral Compounds—thesis for B.S.
- JAMES EDWARD HANSEN *Chemistry*
Primary Decomposition Products Occurring at Successive Temperature in the Carbonization of Eastern High Volatile Coal—thesis for B.S.
- ARTHUR WELLESLEY HAYFORD *Chemical Engineering*
The Examination of Pressure Still Gasolene for the Purpose of (a) Detecting the presence of isoprene, (b) to reduce the unsaturated content—thesis for B.S.
- ROSELLE KARRER *Zoology*
- WILLIAM HOWARD SANDERS *Physics*
- LOUIS SPIEGLER *Chemistry*
Hydrogeneration of Cymene—thesis for B.S.
- ROGER GREENLEAF STEVENS *Chemical Engineering*
Observations on the Rare Earths; The Purification of Yttrium and Erbium—thesis for B.S.
- FRED GUY STRAUB *Chemical Engineering*
Primary Decomposition Products Occurring at Successive Temperatures in the Carbonization of Pocahontas Coal—thesis for B.S.
- CHARLOTTE BALDWIN WARD *Chemistry*
- E. H. WILLIAMS, *Secretary*